

California Climate Action Registry

Electric Power Generators, Utilities, and
Natural Gas Entities

Draft Appendix to the
General Certification Protocol

Draft Version for Public Comment

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Appendix to the General Certification Protocol: Power/Utility Certification Protocol

Guidance for Certification of Entity-Wide Greenhouse Gas Emissions Produced by Electric Power Generators, Electric Utilities and Natural Gas Entities

1.0 Power/Utility Certification Protocol

The Power/Utility Certification Protocol (PUCP) is an appendix to the General Certification Protocol. The intended audience for this Appendix is approved power/utility sector certifiers. However, power/utility entities may also find it useful to review this Appendix to develop a better understanding of the certification activities associated with power/utility sector reporting in the California Climate Action Registry (Registry).

This PUCP provides guidance for reviewing and certifying the portions of a power/utility entity's inventory that are significant and/or unique to the activities of electric power generators and electric utilities. These include:

- Stationary combustion emissions from generation of electricity, heat and steam
- Fugitive emissions from natural gas transmission, storage and distribution, and
- SF₆ emissions from electricity transmission and distribution.

For activities not unique to power generators and electric utilities, reporting guidance is found in the General Reporting and Certification Protocols.

All Registry members report using the General Reporting Protocol and where available, any industry-specific protocols. All certifiers should conduct certifications using the General Certification Protocol and any available industry-specific requirements.

To conduct power/utility certifications, power/utility certifiers must read and be familiar with the following Registry documents:

- General Reporting Protocol
- General Certification Protocol
- Power/Utility Reporting Protocol
- Power/Utility Certification Protocol

These documents are all available on the Registry's website at www.climateregistry.org. If you have difficulty accessing any of the documents, please call 213-891-1444.

The Registry's general and industry-specific reporting and certification protocols are designed to be compatible with each other. Should you encounter a conflict between any of the documents, or if you have questions about carrying out the steps described herein, please contact the Registry at: 1-877-CO2-CCAR.

To provide formal comments or suggestions to the Registry, please complete and submit a *Protocol Comment Form*, available at www.climateregistry.org/Protocols. Comments will be posted on the Registry website for public review and response.

The Registry may update the PUP and PUCP occasionally to reflect new scientific findings or policy direction. The Registry will notify all power/utility entities and approved power/utility sector certifiers when it updates the documents. The current versions of all protocols will always be available on the Registry's website: www.climateregistry.org/protocols.

Please Note: Only State- and Registry-approved power/utility sector certifiers are eligible to certify power/utility entities. It is important to note that State- and Registry-approved certifiers under the Registry's General Reporting Protocol are NOT automatically approved to certify power/utility entities. To become an approved power/utility sector certifier, a general certifier must successfully complete a power/utility sector-specific application process. The complete list of power/utility sector certifiers and information on the application process is available at www.climateregistry.org/certifiers

1.1 Standard for Certification for Electric Power Generators and Electric Utilities

The Registry's standard for power/utility sector certification is its General Reporting Protocol and its Power/Utility Protocol (PUP). The PUP contains the Registry's required sources of direct and indirect emissions, default emission factors and GHG calculations, and is the basis for evaluating whether an entity's reported GHG emissions are reported appropriately. You should only apply the standards described in the GRP, GCP, PUP and this PUCP when assessing a power/utility participant's annual GHG Report to the Registry.

1.2 The Certification Process

The Registry's 10 step certification process is explained in detail in the General Certification Protocol. The guidance in this document must be followed when completing Steps 6 (Conducting Certification Activities) and Step 7 (Certification Documentation) of the certification process.

1.2.1 Required Reporting Elements

A certified power/utility emission report must include all of a participant's significant emissions within the following categories:

Direct Emissions

- Stationary Combustion Emissions
- Mobile Combustion Emissions
- Process Emissions
 - from SO₂ Scrubbers
 - from other processes

Fugitive Emissions

- From Electricity Transmission and Distribution Systems
- From Natural Gas Transmission, Storage and Distribution systems.
- From Fuel Handling and Storage

Indirect Emissions

- Purchased electricity, heat and steam for own consumption
- Electricity Transmission & Distribution Losses

Industry-Specific Metrics

- Energy Output (lbs. CO₂e_{Direct}/MMBtu_{Direct});
- Electricity Generated (lbs CO₂e_{Direct}/MWh_{Net Generated});
- Fossil Electricity Generated (lbs CO₂e_{Direct}/MWh_{Net Fossil Generated});
- Electricity Delivered (lbs. CO₂e_{Direct and Indirect}/MWh_{Net Generated and Net Purchased}); and
- Natural Gas Delivered (lbs. CO₂e_{Direct}/Therm_{Direct}).

1.2.2 Optional Reporting Elements

An annual GHG Emission Report may also contain additional optional information. This could include, for instance, information about a company's environmental policies and goals, renewable energy certificate purchases, purchase power contracts, etc. All non-required GHG data is optional, and does not require certification. Optional information should not be considered in assessing the quality of the required emissions information. Optional information will be clearly distinguished from required information in the CARROT.

2.0 Core Certification Activities: Power/Utility Entities

In addition to the requirements and process outlined in the General Certification Protocol, specific guidance for conducting power/utility entity certification activities for each of the core certification activities follows.

To confirm that power/utility entity GHG emissions have been reported accurately, you may want to review, at a minimum, the documents listed in Table 1 as part of your certification activities.

Note that the documentation list in Table 1 is provided by core certification activity as a reference to both you and the power/utility entity. Prior to your first meeting with the power/utility entity you should review and identify for the entity the documents that you would like access to in order to expedite the certification process. You may also want to provide a comprehensive list of documents that you deem necessary to complete the certification.

Table 1. Suggested Documents for Review During Certification Activities	
Activity or Emissions Source	Documents
Step 1: Identifying Emission Sources	
Emission Source Inventory	CARROT Report Facility Inventory List of Facility Permits Facility Plot Plans Process Flow Diagrams Total Fuel Purchases, by fuel type State Emission Inventory Reports EPA Acid Rain Reports
Organizational, Operational and Geographic Boundaries	List of Emission Sources, including: <ul style="list-style-type: none"> • Stationary Sources • Mobile Sources • Fugitive Sources • Process Emission Sources Security and Exchange Commission (SEC) Form 10k Federal Energy Regulatory Commission (FERC): Form 1 Annual Report of Major Electric Utility Form 2 Major Natural Gas Pipeline Annual Report Energy Information Administration: Forms 176, 191, 412, 423, 767, 857, 860, 861, 906, 920 State Public Utility Commission Filings Map of Operations
Step 2: Understanding Management Systems and Methodologies	
Data Management System	Location of Data Collection System (centralized or decentralized) Type of Management System and Parameters Tracked Data Acquisition and Handling System
Responsibilities for Implementing GHG Management Plan	Entity Organization Chart Greenhouse Gas Management Plan Documentation and Retention Plan
Training	Training Manual Procedures Manual Consultant Qualifications Statement Monitoring Plan
Methodologies	Any Protocols and Emission Factors Used (in addition to the GRP and PUP) Quality Assurance/Quality Control Plans for Continuous Emissions Monitoring Systems
Step 3: Verifying Emission Estimates	
Direct Emissions from Stationary Combustion	FERC Form 1 EIA Forms Fuel Purchase Records Electronic Data Reports Data Acquisition and Handling System Relative Accuracy Test Audit results Accuracy Test Results for Fuel Flow Monitors Fuel Meter Data Fuel meter calibration and maintenance records Inventory of Stationary Combustion Facilities Electric Generation Data (MWh) Steam Generation Data (Mlbs) Air Permits State and Federal Inventory Reports Any Protocols and Emission Factors Used (in addition to the GRP and PUP)
Direct Emissions from Mobile Combustion	Fuel Purchase Records, Fuel in Stock, Vehicle Miles Traveled, Inventory of Vehicles, Any Protocols and Emission Factors Used (in addition to the GRP)
Direct Emissions from Process Activities	SO ₂ Scrubber installation and operation records Calcium Carbonate Purchase Records Any Protocols and Emission Factors Used (in addition to the GRP and PUP)

Direct Fugitive Emissions from Natural Gas Transmission, Storage and Distribution	FERC Form 2 EIA Natural Gas Forms Internal Unaccounted for Gas Analyses Gas Throughput Data Facility Inventory Any Protocols and Emission Factors Used (in addition to the PUP)
Direct Fugitive Emissions from Electricity Transmission and Distribution	State and Federal Inventory Reports EPA SF ₆ Annual Reporting Form Transmission/Substation Maintenance and Installation Logs SF ₆ Purchase, Sales and Recycling Records, SF ₆ Activity Logs Any Protocols and Emission Factors Used (in addition to the PUP)
Direct Fugitive Emissions from Air Conditioning and Refrigeration Systems (Stationary and Mobile)	Refrigerant Purchase Records Refrigerant Sales Records Any Protocols and Emission Factors Used (in addition to the GRP)
Direct Fugitive Emissions from Fire Suppression Equipment	Fire Suppression Purchase Records Refrigerant Sales Records Any Protocols and Emission Factors Used (in addition to the GRP)
Direct Fugitive Emissions from Fuel Handling and Storage (Coal and Biomass)	Coal Purchase Records Biomass Purchase Records Any Protocols and Emission Factors Used (in addition to the PUP)
Indirect Emissions from Electricity Transmission and Distribution Losses	FERC Form 1 Purchase Power Records Wheeling Records Direct Access Records Total Receipts and Delivery of Electricity Any Protocols and Emission Factors Used (in addition to the PUP)
Indirect Emissions from Electricity Use	Monthly Electric Utility Bills Emission Factors (if not default)
Indirect Emissions from Cogeneration	Monthly Utility Bills Fuel and Efficiency Data from Supplier Emission Factors (if not default)
Indirect Emissions from Imported Steam	Monthly Utility Bills Fuel and Efficiency Data from Supplier Emission Factors (if not default)
Indirect Emissions from District Heating	Monthly Utility Bills Fuel and Efficiency Data from Supplier Emission Factors (if not default)
Indirect Emissions from District Cooling	Monthly Utility Bills Fuel and Efficiency Data from Supplier Emission Factors (if not default)

Step 1: Identifying Emission Sources

Certifiers should review each power/utility participant's reported emission source inventories (facility, source, and fuel) to ensure that all significant sources are identified. Certifiers should then determine the GHGs that will result from the identified sources and estimate their magnitude. GHGs that are not required to be reported can be disregarded. Finally, certifiers should rank the remaining reported emissions by CO₂e to assess the environmental risk associated with the emissions.

When the emission source inventory is complete, certifiers should review the power/utility participant's GHG Emission Report and document answers to the following questions, to assess if the GHG Emission Report reflects the geographic, organizational, and operational scope of the power/utility participant:

1. Does the GHG Emission Report include all facilities and sites under the ownership or management control of the participant?

2. Does the report include all sources of GHG emissions within the geographic and organizational boundaries of the participant?
3. Does the report include all applicable types of GHGs from each emission source within the geographic and organizational boundaries of the participant?
4. Has the participant specified a baseline or baselines?
 - a. If so, have any mergers, acquisitions, or divestitures occurred during the current reporting year?
 - b. Have any significant activities been outsourced in the current year?
 - c. If so, has the baseline been adjusted to reflect any structural changes?

After these questions have been answered, certifiers will be able to determine if the GHG Emission Report accurately reflects the geographic, organizational, and operational scope of the participant.

The following tables provide a listing of potential sources from the power/utility sector. This information is also included in the Power/Utility Certification Activities Check List.

Table 2. List of Sources within Power/Utility Sectors			
Stationary Sources			
Technology	Source Type		
Boilers	Natural gas boilers, residual or distillate oil boilers, coal fired boilers (pulverized coal, fluidized bed, spreader stoker, tangentially fired, wall fired, etc.), biomass fired boilers, dual fuel fired boilers, auxiliary boilers, etc.		
Turbines	Combined cycle gas, simple cycle gas, combined heat and power, microturbines, steam turbines, integrated gasification combined cycle, etc.		
Internal Combustion Engines	Emergency and backup generators, reciprocating engines, compressors, firewater pumps, black start engines, etc.		
Flares	Natural gas, landfill gas, waste gas, etc.		
Other	Fuel cells, geothermal, anaerobic digesters, refuse derived fuels, etc.		
Fugitive CH ₄ and CO ₂ Transmission, Storage and Distribution Sources			
Segment	Facilities	Equipment	
Natural Gas Transmission	Transmission Pipeline Networks, Compressor Stations, Meter and Pressure Regulating Stations	Vessels, Compressors, Pipelines, Meters/Pressure Regulators, Pneumatic Devices, Valves, Flanges, Seals and Other Pipe Fittings	
Natural Gas Storage	Underground Injection/Withdrawal Facilities, and Liquefied Natural Gas (LNG) Facilities	Wellheads, Vessels, Compressors, Dehydrators, Heaters, Pneumatic Devices, Valves, Flanges, Seals and Other Pipe Fittings	
Natural Gas Distribution	Main and Service Pipeline Networks, Meter and Pressure Regulating Stations	Pipelines, Meters and Pressure Regulators, Pneumatic Devices, Customer Meters, Valves, Flanges, Seals and Other Pipe Fittings	
Vented CH ₄ Transmission, Storage and Distribution Sources			
Segment	Facilities	Equipment	
Natural Gas Transmission	Transmission Pipeline Networks, Compressor Stations, Meter and Pressure Regulating Stations	Station Venting, Dehydrator Vents, Pipeline Venting, Pneumatic Devices, Mishaps (diggins)	
Natural Gas Storage	Underground Injection/Withdrawal Facilities, and Liquefied Natural Gas (LNG) Facilities	Station Venting, Pneumatic Devices, Dehydrator Vents	
Natural Gas Distribution	Main and Service Pipeline Networks, Meter and Pressure Regulating Stations	Pipeline Venting, Pneumatic Devices, Pressure Relief Valves, Mishaps (diggins)	
Fugitive SF ₆ Sources			
Segment	Equipment		
Electricity Transmission	Circuit Breakers, Current-Interruption Equipment, Transmission Lines, Transformers, Substations		
Electricity Distribution	Circuit Breakers, Current-Interruption Equipment, Distribution Lines, Transformers, Substations		
Other Fugitive Emission Sources			
Segment	Facilities	Source	Fugitive Emissions
Fuel Handling and Storage	Electric Generation Facilities, Fuel Storage Facilities	Coal Piles, Biomass Piles	CH ₄
Stationary and Mobile Cooling and Refrigeration	Electric Generation Facilities, Office Buildings, Mobile Sources	Air Conditioning and Refrigeration Systems	HFCs
Fire Extinguishers	Electric Generation Facilities	Total Flooding Fire Extinguishing Systems	HFCs
Indirect Emissions Sources (T&D Losses)			
Segment	Facilities	Equipment	
Electricity Transmission	Feeders and Transmission Lines	Conductors	
Electricity Distribution	Distribution Systems and Substations	Transformers	
Indirect Emissions Sources (Purchased Electricity, Heat, Steam, and Cooling for Own Consumption)			
Segment	Electricity use in office buildings and other sites.		

District cooling use in office buildings and other sites.
District heating use in office buildings and other sites.
Cogeneration use in office buildings and other sites.
Imported steam in office buildings and other sites.

Once you have identified and reviewed all emission sources, please proceed to Step 2 to review the calculation methods used and the management systems employed.

Step 2: Reviewing GHG Management Systems and Estimation Methodologies

After the scope and comprehensiveness of the participant's emission sources has been confirmed, certifiers should review the methodologies and management systems that the participant used to calculate their emissions.

This is principally a risk assessment exercise, in which the certifier must weigh the relative complexity of the scope of the participant's emissions, the participant's methodologies and management systems used to prepare the GHG Emission Report, and the risk of calculation error as a result of reporting uncertainty or misstatement. Through these steps, the certifier should determine the appropriateness of the management systems to provide required data to the Registry.

A certifier's general review of a participant's GHG management systems should document answers to the following questions:

1. Are calculation methodologies/procedures used to manage GHG emissions at the unit and/or the facility level?
2. Are the methodologies/procedures appropriate given the uncertainty/risk associated with the emissions?
3. Are these methodologies/procedures standard within the power/utility industry as stipulated in 40 CFR Part 75?
4. Are methods used to manage and implement entity-wide GHG emissions reporting programs appropriate for the size and complexity of the organization?
5. If the participant has more than one facility, are the emissions data correctly aggregated and monitored at the entity level?
6. Is an individual responsible for managing and reporting GHG emissions? Is this individual qualified to perform this function?
7. Is appropriate training provided to personnel assigned to GHG emissions reporting duties?
8. If the participant relies on external staff to perform required activities, are the contractors qualified to undertake such work? Is there internal oversight to assure quality of the contractor's work?
9. Are appropriate documents created to support and/or substantiate activities related to GHG emissions reporting activities, and is such documentation retained appropriately? For example, is such documentation maintained through reporting plans or procedures, fuel purchase records, etc.?

10. Are the mechanisms used to measure and review the effectiveness of GHG emissions reporting programs appropriate for this purpose? For example, are policies, procedures, and practices evaluated and updated at appropriate intervals?

Certifiers should also consider how participants' management systems are designed to support reporting five categories of emission sources (indirect, mobile, stationary, process and fugitive). Consequently, in reviewing a participant's Total Emissions Report, certifiers should document answers to the following questions:

1. Does the management system capture the diversity of the sources that comprise each emission category? For example, are there multiple types of electric generating sources and other stationary combustion sources that require different emission estimation methodologies?
2. Does the system capture all the GHGs emitted from each emission source category?
3. Has the participant used the emission factors and standardized estimation methods in the Registry's Power/Utility Protocol to calculate emissions in each source category?
 - a. If not, has the participant or its technical assistance provider developed estimation methods independently?
 - b. If the participant uses alternative emission factors, are they documented and explained appropriately?
4. Does the participant's GHG management system appropriately track emissions in all of the emission source categories?

Once the certifier has assessed the overall risk associated with the management systems, the risks should be assessed in conjunction with the weighted CO₂e estimates determined in Step 1 (Identifying Emission Sources).

Certifiers should then identify the areas with the greatest potential for material misstatements (either based on volume of emissions, lack of management systems, or both) to determine the best risk-based strategy to identify a representative sample of emissions to recalculate in Step 3 below.

Step 3: Verifying Emission Estimates

The final step in completing the core certification activities is to verify the emission estimates. To do so, you will re-calculate a subset of the power/utility entity's emissions and compare your calculated results from this sub-sample with the power/utility entity's calculated results from the same sources to determine if the GHG emissions inventory is free of material misstatements. Based on a participant's identified emission sources, management systems, and corresponding risk profile of GHG emissions, certifiers should select a representative sample of calculations to verify and sites to visit. Sampling procedures may entail conducting site visits, but should include reviewing documents such as fuel purchase records or emissions monitor results, and recalculating emission estimates based on underlying activity data.

This Step is principally a risk assessment exercise, in which you must weigh the relative complexity of the scope of and diversity of the power/utility entity's GHG emissions, the appropriateness of a power/utility entity's calculation methodologies and GHG management systems used to prepare the annual inventory report, along with the risk of calculation or reporting error to determine the best risk-based strategy to identify a representative sample to sample and re-calculate. You must compare your emissions data and calculations to the power/utility entity's emissions data and calculations for the same sources.

To finish Step 3, you must complete the following tasks:

1. Assess the areas of greatest impact and uncertainty in the emissions profile.
2. Select a representative sample of data to recalculate and sources to visit.
3. Develop and implement a strategy to recalculate the GHG emissions and visit the sources in the sample.
4. Assess the power/utility entity's data collection.
5. Compare your estimated GHG emissions to those of the power/utility entity to determine if any material misstatements exist.

2.1 Documentation

When assessing the participant's reported emissions, you will review a number of corporate documents, including invoices, purchases, financial reports, and regulatory filings to ascertain the validity of the reported information. As part of your recalculation, you should compare data from multiple sources to verify data accuracy.

The power/utility sector already reports entity-level assets, operational, financial and emissions data to local, state and federal agencies. These reports are third party audited and verified by the receiving agencies. For purposes of the PUCP, certifiers can accept that data taken from previously audited reports, including FERC, SEC, U.S. EPA, CPUC and AQMD filings, is correct. However, certifiers should verify that data has been transferred into the CARROT correctly, and also review the participant's operations to ensure that the meters and sensors that collect data reported to these agencies are properly maintained and functioning.

2.2 Certifying Emissions from CEMs

For participants reporting CO₂ emissions from their stationary combustion sources using CEMs under 40 CFR Part 75, at your discretion, you may review CEMs specific Monitoring Plans, CEMs specific QA/QC Plans, CEMs specific maintenance records, Data Acquisition and Handling System (DAHS), and Relative Accuracy Test Audits (RATA) as you certify the participant's GHG inventory.

If you are uncertain of the accuracy of the CEMs data, you may cross-check this data with the CO₂ emissions based on total fuel use calculations. In any instance where a participant's CO₂ emissions reported from CEMs data differs significantly (greater than 10%) from that calculated from fuel use, this may constitute a material misstatement. As

such, if you complete the CEMs to fuel based calculation cross check and the values differ by greater than 10%, then you should investigate the cause and request that the entity correct the misstatement prior to certifying the inventory.

2.3 Conducting Site Visits

In Table 3, below, the Registry recommends the minimum number of facilities that should be visited based on the size of the entity. A facility is considered all buildings and operations located at the same mailing address. However, participants also have some flexibility in how they can define a facility. The certifier should use professional judgment to assess the number of visits needed, and the appropriateness of the participant's classification and description of its facilities.

Table 3. Recommended Minimum Number of Facilities to Be Visited Based on Participant Size	
Total Facilities	Minimum Sample Size
2-10	30%
11-25	20%
26-50	15%
51-100	10%
101-250	5%
251-500	3%
501-1,000	2%
Over 1,000	1-2%

2.4 Questions to Consider in Verifying Emissions Estimates

A certifier's verification of emissions estimates should document the answers to the following questions:

1. Is the reported total stationary fuel use by fuel type consistent with the fuel use records?
2. Is the reported total consumption of fuels in motor vehicles consistent with available documentation and by vehicle type? If the entity calculates transportation emissions based on vehicle mileage, is the reported vehicle mileage consistent with vehicle mileage records?
3. Are the reported process and fugitive emissions consistent with activity data, maintenance records, or purchase and sales records?
4. Are the emission factors used by the participant appropriate? If Registry default factors are not used, do the alternative emission factors provide increased accuracy? Is their derivation and explanation of increased accuracy properly documented and reasonable?
5. Are the reported electricity, steam, and district heating and cooling use consistent with utility bills?
6. Does a sample of the participant's calculations agree with your re-calculated direct (mobile, stationary, process & fugitive) & indirect emissions estimates?

7. Does the participant use an approved CEMs configuration?
8. Is this the first year that a participant is reporting CO₂ emissions to the Registry using CEMs?
 - a. If so, does the fuel based calculations corroborate the CO₂ emissions reported?
9. Has the CO₂ emission rate (lbs CO₂/MWh) changed by 10% or more from the previous year at a unit that CEMs is used to report emissions?
 - a. If so, does the fuel-based calculations corroborate this change?
10. Have you documented your process for determining the appropriate sampling plan?
11. Have you performed data triangulations where reasonable?
12. Are all significant GHG emissions included? Are all emissions that are considered de minimis emissions documented as such?
13. Are the current year's reported emissions significantly different from the prior year's emission levels? If so, do you understand the reasons for the changes, and to the best of your knowledge, do they explain the differences in emissions?
14. Has the accumulated change in reported emissions, since the last baseline update, changed by more than ten (10) percent? If so, has the baseline, if any, been recalculated?
15. Are any discrepancies between your emissions estimates and the participant's material? If so, have you addressed those discrepancies with the participant?

2.5 Finishing the Certification Process

Upon completion of these activities, you should follow the remaining steps in the certification process, as detailed in the General Certification Protocol.

Power/Utility Entity Inventory Certification Activities Log		
Preparing for Certification		Date Achieved
Bid on a Certification Contract		
Request determination of COI from CEC		
Negotiate Contract with Registry Power/Utility Entity		
Notify CEC and Registry of Planned Certification Activities		
Conduct Kick-off Meeting With Power/Utility Entity		
Plan Certification Activities Based on Power/Utility Entity Characteristics		
Core Certification Activities		Date Achieved
Step 1: Identify Potential Emission Sources		
Review and confirm the entity's GHG emissions inventory includes all required sources and meets the Registry's standards direct (stationary, mobile, fugitive, and process) and indirect (purchased and consumed electricity, steam and heat and T&D losses).		
Review & confirm the power/utility entity's geographic boundaries.		
Review & confirm the power/utility entity's organizational boundaries (review ownership & reporting scope).		
Confirm the power/utility entity's reporting responsibility (classified under one or more NAICS codes).		
Check state and federal records to determine all key sources of the entity are included.		
If a baseline is specified:		
Assess if any structural changes occurred within the entity.		
Determine if emission sources have changed.		
Questions	Yes	No
1. Does the GHG Emission Report include all significant emissions from all direct and indirect emissions sources by the entity within the state of California, including:		
Stationary Sources: Boilers, turbines, internal combustion engines, flares, and other?		
Fugitive CH₄ and CO₂ Transmission, Storage and Distribution Sources:		
<ul style="list-style-type: none"> <u>Natural Gas Transmission:</u> Transmission Pipeline Networks, Compressor Stations, Meter and Pressure Regulating Stations? <u>Natural Gas Storage:</u> Underground Injection/Withdrawal Facilities and LNG Facilities? <u>Natural Gas Distribution:</u> Mains and service pipeline networks, meter and pressure regulating stations? 		
Vented CH₄ Transmission, Storage and Distribution Sources:		
<ul style="list-style-type: none"> <u>Natural Gas Transmission:</u> Transmission Pipeline Networks, Compressor Stations, Meter and Pressure Regulating Stations? <u>Natural Gas Storage:</u> Underground Injection/Withdrawal Facilities and LNG Facilities? <u>Natural Gas Distribution:</u> Mains and service pipeline networks, meter and pressure regulating stations? 		
Fugitive SF₆ Sources:		
<ul style="list-style-type: none"> <u>Electricity transmission:</u> Circuit breakers, current-interruption equipment, transmission lines and transmission substations? <u>Electricity distribution:</u> Circuit breakers, current-interruption equipment, transmission lines and transmission substations? 		
Other Fugitive Emission Sources: from fuel handling and storage, stationary and mobile cooling and refrigeration?		
Indirect Emission Sources associated with T&D Losses: feeders and transmission lines, distribution systems and substations?		
Indirect Emission Sources associated with Purchased Energy: electricity, steam, heating and cooling bills ?		
2. Does the report include all significant GHG emissions from each of the required sources within the geographic and organizational boundaries of the power/utility entity?		

3. Have any mergers, acquisitions, or divestitures occurred during the current reporting year?		
4. Have any activities been outsourced in the current year? If a baseline has been set, has it been adjusted accordingly?		
2. Review Methodologies and Management Systems	Date Achieved	
Review the power/utility entity's GHG management plans.		
If the power/utility entity has established an entity baseline, review the baseline assumptions and confirm the appropriateness of the baseline.		
Review the power/utility entity's quantification methodologies and emission factors and confirm they meet the Registry's criteria, and assess its appropriateness		
Review the power/utility entity's monitoring and measurement methodologies, confirm it meets the Registry's criteria, and assess its appropriateness		
Evaluate GHG Personnel Training and ability to prepare the Annual Emission Report		
Questions	Yes	No
5. Does the power/utility entity have an appropriate management plan for each primary activity?		
6. Are appropriate methods used to manage and implement entity-wide GHG emissions reporting programs?		
7. Is the power/utility entity's emissions data correctly aggregated and monitored?		
8. Is a qualified individual responsible for managing and reporting GHG emissions?		
9. Is appropriate training provided to personnel assigned to GHG emissions reporting duties? If the power/utility entity relies on external staff to perform required activities, are the contractors' qualified to undertake such work?		
10. Are appropriate documents created to support and/or substantiate activities related to GHG emissions reporting activities, and is such documentation retained appropriately?		
11. Are appropriate mechanisms used to measure and review the effectiveness of GHG emissions reporting programs? For example, are policies, procedures, and practices evaluated and updated at appropriate intervals?		
12. Does the power/utility entity have a sound annual data gathering system in place to provide accurate data for the entity's annual report?		
13. Has the power/utility entity used the Registry's default calculation methodologies to calculate emissions in each source category?		
13a. If power/utility entity uses alternative calculations, are they documented and explained appropriately? Do they meet the Registry's criteria for accuracy and precision?		
14. Have any activities been outsourced in the current year? If a baseline has been set, has it been adjusted accordingly?		
15. Has the power/utility entity used the Registry's default emission factors to calculate emissions in each source category?		
15 a. If power/utility entity uses alternative emission factors are they documented and explained appropriately? Do they meet the Registry's criteria for accuracy and precision?		
3. Verify Emission Estimates	Date Achieved	
Create a risk-based sampling method to directly sample power/utility entity's sources		
Survey a sub sample of sources by area:		
Direct Stationary Combustion Emissions		
Direct Mobile Combustion Emissions		
Direct Fugitive Emissions		
Direct Process Emissions		
Indirect Emissions from T&D Losses		

Indirect Emissions from Purchased and Consumed Electric, Heat and Steam		
Compare your results from your sub-samples with the power/utility entity's results using the methodologies and emissions factors and determine if any material misstatements exist		
Questions	Yes	No
16. Did you survey the sources described by the power/utility entity to confirm the accuracy of their descriptions?		
17. Does your certification sampling methodology account for the diversity of sources and activities within the power/utility entity?		
18. Total number of power/utility entity sources by category: _____ Total number of sources by category sampled: _____		
19. Did the power/utility entity calculate their emissions accurately (within 95% of your calculations?)		
20. Does the participant have approved CEMs Monitoring Plans, Data Acquisition and Handling Systems, QA/QC Plans, Relative Accuracy Test Audit Results?		
21. Is this the first year that a participant is reporting CO2 emissions to the Registry using CEMs? a. If so, does fuel-based calculations corroborate the results?		
22. Has the CO2 emission rate (lbs CO2/MWh) changed by 10% or more from the previous year at units that report using CEMs? a. If so, does fuel-based calculations corroborate the results?		
23. If your sampling results differed by more than 5% from the power/utility entity's, did the power/utility entity adjust their results to be consistent with your findings?		
24. Have you performed data triangulations where reasonable?		
25. Are the current year's reported emissions significantly different from the prior year? If so, are the causes of changes understood by you and reasonable?		
26. Has the accumulated change in reported emissions, since the last baseline update, changed by more than 10%?		
27. Has the methodology with which the power/utility entity calculated emissions changed from previous years? a. If so, have previous years been recalculated?		
Completing the Certification Process	Date Achieved	
Prepare a Detailed Certification Report & present to power/utility entity		
Complete the Power/Utility Emission Inventory Certification Activities Log & present to power/utility entity		
Prepare a Certification Opinion for the entity's GHG emissions & present to power/utility entity		
Prepare a Certification Opinion for the entity's GHG emissions inventory & present to power/utility entity		
Conduct Exit Meeting with power/utility entity to discuss Certification Report, Opinion, and Logs		
Submit Authorized Certification Opinions and Certification Activities Checklists to the Registry		
Provide Certification Records to Client for Retention		